

Guangzhou Yixiu Lvbian Energy Technology Co.,ltd

## SPECIFICATION

**NAME:** waterproof lifepo4 battery charger

**PARAMETER:** 28.8V/18A



## 1. General

24V waterproof Battery Charger ( can work normally under 28.8Vdc/18A with 8s lifepo4 batteries

## 2. Electrical Specification

### 2.1 Main product specification

| No. | Model                      | Technical specification | Remark |
|-----|----------------------------|-------------------------|--------|
| 1   | For battery type           | 8s lifepo4 batteries    |        |
| 2   | Max output voltage         | 28.8V± 0.2V             |        |
| 3   | Output current             | 18A± 0.5A               |        |
| 4   | Input voltage range        | 200-240Vac              |        |
| 5   | AC input voltage frequency | 50-60HZ                 |        |

### 2.2 Output characteristic or charge stages

| No. | Item                    | Technical specification | Remark                |
|-----|-------------------------|-------------------------|-----------------------|
| 1   | CC(constant current)    | 18A ± 0.2Adc            |                       |
| 2   | CV(constant voltage)    | 28.8V± 0.2Vdc           |                       |
| 3   | Actual Output Power     | 518W                    |                       |
| 4   | Floating charge voltage | NO                      |                       |
| 5   | Transition Current      | 0.9A± 0.05A             |                       |
| 6   | Power efficiency        | ≥85%                    | Vin=220Vac,rated load |

## 2.3 Protection characteristics

| No. | Item                        | Technical specification   | Remark     |
|-----|-----------------------------|---|------------|
| 1   | Over voltage protection     | If the charger exceeds the maximum set voltage and will automatic protect   |            |
| 2   | Over current protection     | If the charger output current exceeds the maximum charging current , it enters the current protection state   | At CC mode |
| 3   | Over temperature protection | If charger's inside temperature up to about 78°C, The output power of the charger is halved into the protection state until normal operating temperatures will be continue charging |            |
| 4   | Short circuit protection    | If a short-circuit is detected, the charger will automatically shut down. The charger will resume normal charging once the short-circuit is no longer detected.                     |            |
| 5   | Reverse polarity protection | If output wire are reversely connected to the batteries , the charger will not operate and will work normally when DC wires are correctly connected.                                |            |

## 2.4 Charging LED indicator

| No. | Item            | Status                  | Remark |
|-----|-----------------|-------------------------|--------|
| 1   | Standby         | Green                   |        |
| 2   | Charging < 80%  | Red                     |        |
| 3   | Charging > 80%  | Yellow                  |        |
| 4   | Charged=100%    | Green                   |        |
| 5   | Abnormal output | Red light fast flashing |        |

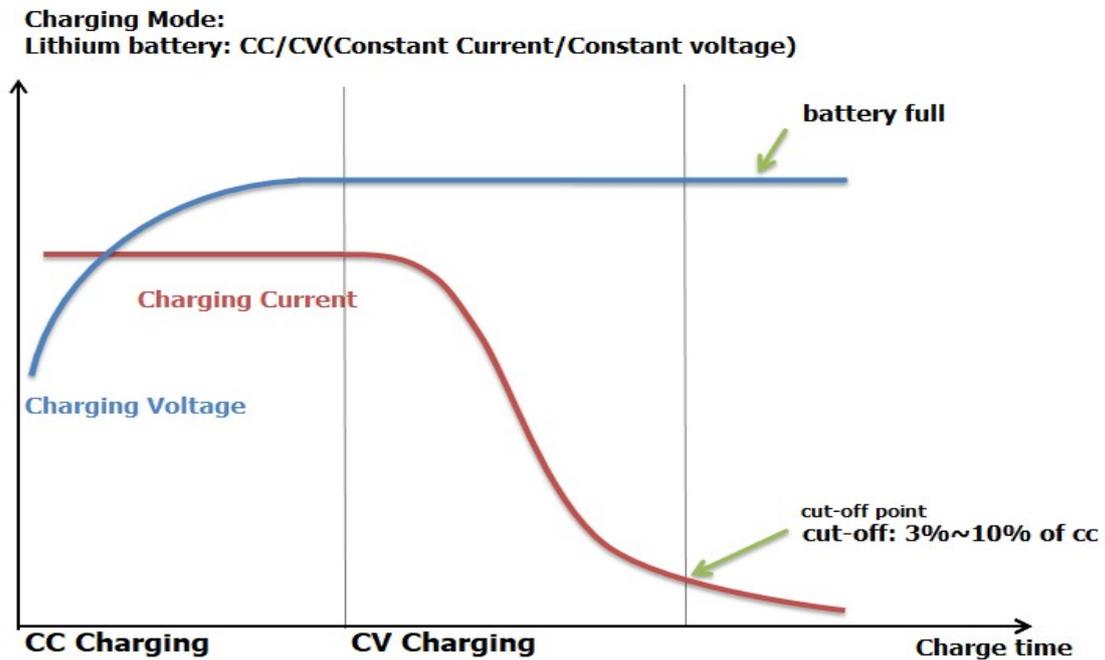
### 3. Safety

| No. | Item                   |              | Standard (or test condition) | Remark |
|-----|------------------------|--------------|------------------------------|--------|
| 1   | Electric Strength test | Input-Output | 1500Vdc/1min $\leq$ 3mA      | OK     |
|     |                        | Input-Earth  |                              |        |
| 2   | Isolation resistance   | Input-Output | $\geq$ 10M $\Omega$ @500Vac  | OK     |
|     |                        | Output-Shell |                              |        |

### 4. Environmental testing

| No. | Item                               | Specification | Remark  |
|-----|------------------------------------|---------------|---|
| 1   | High temperature ambient operating | +50°C         | Features OK   |
| 2   | Low temperature ambient operating  | -15°C         | Features OK   |
| 3   | High temperature storage           | +70°C         | Work normally after recovery under normal temperature for 2 hours |
| 4   | Low temperature storage            | -40°C         | Work normally after recovery under normal temperature for 2 hours |
| 5   | Altitude                           | 0-3000m       |   |
| 6   | Humidity                           | 5~95%         |   |

## 5. Charging Curve



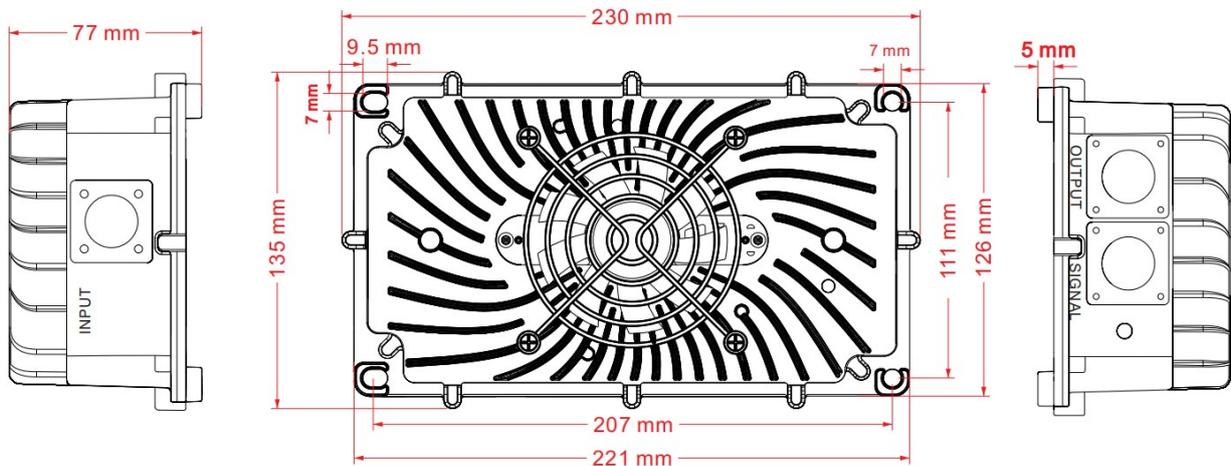
### 5.1 Charging Mode

| Charging mode | Output Voltage                                   | Output Current           | Decription       |
|---------------|--|--------------------------|------------------|
| C.C. Charge   | 15~28.8V $\pm$ 1.0V                              | 18A $\pm$ 0.2A           | Constant Current |
|               | Charging the battery by 18.0A constant current . |                          |                  |
| C.V mode      | 28.8V $\pm$ 0.2V                                 | 18.0A $\rightarrow$ 0.9A | Constant Voltage |
|               | Charging the battery by 28.8V constant voltage.  |                          |                  |
| Charging      | 28.8 V $\pm$ 0.2V <                              | 0.9A ( $\pm$ 0.05A)      |                  |
| Completed     | Charge complete. Current 0.9 A                   |                          |                  |

## 6. Charger characteristic

| No. | Item               | Description               | Size                   | 备注<br>Remark |
|-----|--------------------|---------------------------|------------------------|--------------|
| 1   | Shell material     | Aluminum                  | L*W*H:<br>230*135*77mm |              |
| 2   | Input plug         | 220vac Eu plug            | AC cable 1.5m          |              |
| 3   | Output Plug        | As customers' requirement | DC cable 1.5m          |              |
| 4   | Net Weight         | 2.2KG                     | /                      |              |
| 5   | Package            | 4 pcs / carton            | /                      |              |
| 6   | Waterproof Feature | IP67                      | /                      |              |
| 7   | Fan                | cooling Fan               | /                      |              |

### 6.1 structure chart



## 7. Reliability requirements

| No. | Item                  | Technical specification  | Remark |
|-----|-----------------------|--|--------|
| 1   | MTBF                  | MTBF no less than 20000 hours (25 degrees C, Full load and rated voltage input)            |        |
| 2   | Burn-in and Life test | At ambient temperature 25 °C aging in two minutes, shell surface temperature $\leq 55$ °C. |        |